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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,604	07/20/2001	Kouichi Harada	09792909-5090	2174

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EXAMINER

HERNANDEZ, NELSON D

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/910,604	<b>Applicant(s)</b> HARADA, KOUICHI	
	<b>Examiner</b> Nelson D. Hernandez	<b>Art Unit</b> 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on After Final Amendment filed on 2/10/2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Examiner acknowledges the amendments made on the claims filed on February 10, 2006. Claims 1 and 6 have been amended. Claims 3, 4 and 8 have been canceled.

### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Response to Arguments***

3. Claims 1 and 6 have been amended to include the limitations of claim 4, which was indicated as having allowable subject matter in the Office Action mailed on August 10, 2005. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

4. In the Office Action on August 10, 2005, it was indicated that claims 5 and 7 were allowable. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueda, US Patent 4,837,630.**

**Regarding claim 1,** Ueda discloses a solid-state image apparatus comprising: an image section having a plurality of pixels (Fig. 1: 11) arranged two dimensionally in the horizontal direction and in the vertical direction (See fig. 1), the image section comprising a first area formed of a first pixel group (even lines in the image sensor as shown in figs. 4C and 4D) and a second area formed of a second pixel group (odd lines in the image sensor as shown in figs. 4A and 4B), and the first area and the second area being disposed adjacent to each other in the horizontal direction (the odd and even lines are arranged in the whole pixel area, therefore, the first and second areas are disposed adjacent to each other in the horizontal and vertical direction); a first electric-charge transfer (Fig. 1: 17) section disposed outside the image area for transferring the signal electric charges of the first area in the horizontal direction; a second electric-charge transfer section (Fig. 1: 18) extending across the entire width of the image section and disposed outside the image area (See fig. 1) for transferring the signal electric charges of the second area in the horizontal direction; and driving means (clock, see col. 2, lines 51-60; col. 3, lines 36-50) for driving the first and second electric-charge

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transfer sections in an identical direction (See also fig. 1 and fig. 4E), wherein the first and second electric-charge transfer sections are disposed such that the first electric-charge transfer section transfers only the signal electric charges of the first area and the second electric-charge transfer section transfers only the signal electric charges of the second area (By using switches 13 as shown in figs. 4A-4D; see col. 3, line 36 – col. 4, line 52); and further comprising a vertical transfer section (Fig. 1: 15) for transferring the signal electric charges of the second area to the second electric-charge transfer section without passing through the first electric-charge transfer section (col. 3, lines 36-50), wherein the first electric-charge transfer section is disposed between the first area and the second electric-charge transfer section (See horizontal CCD 17 being disposed between first area (even lines area) and the horizontal CCD 18 as shown in fig. 1) and wherein the vertical transfer section is disposed between the second area and the second electric-charge transfer section (See vertical CCD 15 disposed between the second area (odd lines area) and the horizontal CCD 18) (Col. 2, lines 38-60; col. 3, lines 36-52; see also col. 4, line 53 – col. 5, line 37).

**Regarding claim 2**, Ueda discloses that the driving means drives the first and second electric-charge transfer sections by an identical driving signal (See col. 2, lines 38-60; col. 3, lines 51-66; col. 5, lines 15-37).

**Regarding claim 5**, Ueda discloses a solid-state image apparatus comprising: an image section having a plurality of pixels (Fig. 1: 11) arranged two dimensionally in the horizontal direction and in the vertical direction (See fig. 1), the image section comprising a first area formed of a first pixel group (even lines in the image sensor as

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shown in figs. 4C and 4D) and a second area formed of a second pixel group (odd lines in the image sensor as shown in figs. 4A and 4B), and the first area and the second area being disposed adjacent to each other in the horizontal direction (the odd and even lines are arranged in the whole pixel area, therefore, the first and second areas are disposed adjacent to each other in the horizontal and vertical direction); a first electric-charge transfer (Fig. 1: 17) section disposed outside the image area for transferring the signal electric charges of the first area in the horizontal direction; a second electric-charge transfer section (Fig. 1: 18) extending across the entire width of the image section and disposed outside the image area (See fig. 1) for transferring the signal electric charges of the second area in the horizontal direction; and a vertical transfer section (Fig. 1: 15) for transferring the signal electric charges of the second area to the second electric-charge transfer section without passing through the first electric-charge transfer section (col. 3, lines 36-50), wherein the first electric-charge transfer section is disposed between the first area and the second electric-charge transfer section (See horizontal CCD 17 being disposed between first area (even lines area) and the horizontal CCD 18 as shown in fig. 1) and the vertical transfer section is disposed between the second area and the second electric-charge transfer section (See vertical CCD 15 disposed between the second area (odd lines area) and the horizontal CCD 18) (Col. 2, lines 38-60; col. 3, lines 36-52; see also col. 4, line 53 – col. 5, line 37).

**Regarding claim 6**, claim 6 is a method claim of claim 1, therefore, limitations can be found in claim 1.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda, US Patent 4,837,630.**

**Regarding claim 7,** Ueda discloses a camera system (See fig. 5) comprising: a solid-state image apparatus (See figs. 1, 4A-4F and 7-10), the solid-state image apparatus comprising: an image section having a plurality of pixels (Fig. 1: 11) arranged two dimensionally in the horizontal direction and in the vertical direction (See fig. 1), the image section comprising a first area formed of a first pixel group (even lines in the image sensor as shown in figs. 4C and 4D) and a second area formed of a second pixel group (odd lines in the image sensor as shown in figs. 4A and 4B), and the first area and the second area being disposed adjacent to each other in the horizontal direction (the odd and even lines are arranged in the whole pixel area, therefore, the first and second areas are disposed adjacent to each other in the horizontal and vertical direction); a first electric-charge transfer (Fig. 1: 17) section disposed outside the image area for transferring the signal electric charges of the first area in the horizontal direction; a second electric-charge transfer section (Fig. 1: 18) extending across the entire width of the image section and disposed outside the image area (See fig. 1) for transferring the signal electric charges of the second area in the horizontal direction;

and driving means (clock, see col. 2, lines 51-60; col. 3, lines 36-50) for driving the first and second electric-charge transfer sections in an identical direction (See also fig. 1 and fig. 4E), a vertical transfer section (Fig. 1: 15) for transferring the signal electric charges of the second area to the second electric-charge transfer section without passing through the first electric-charge transfer section (col. 3, lines 36-50), a signal processing circuit for combining output signals of the solid-state image apparatus to generate a signal corresponding to signal electric charges of one line in the image section (see col. 5, line 38 – col. 6, line 19), wherein the first electric-charge transfer section is disposed between the first area and the second electric-charge transfer section (See horizontal CCD 17 being disposed between first area (even lines area) and the horizontal CCD 18 as shown in fig. 1) and wherein the vertical transfer section is disposed between the second area and the second electric-charge transfer section (See vertical CCD 15 disposed between the second area (odd lines area) and the horizontal CCD 18) (Col. 2, lines 38-60; col. 3, lines 36-52; see also col. 4, line 53 – col. 5, line 37).

Ueda fails to teach an optical system for guiding incident light to the image section of the solid-state image apparatus.

However, Official Notice is taken that the use of optical system for guiding incident light to the image section of a solid-state image apparatus is notoriously well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ueda by having an optical system for guiding incident light to the image section of the solid-state image apparatus. The



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motivation to do so would have been to improve the image being captured depending on the application (increasing depth of field, zooming, focusing, etc).

### ***Conclusion***

9. Because this Office Action is replacing the Final Rejection dated 8/10/05 (the 8/10/05 Final having been proper based upon applicant's amendment), **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernandez whose telephone number is (571) 272-7311. The examiner can normally be reached on 8:30 A.M. to 6:00 P.M..


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nelson D. Hernandez  
Examiner  
Art Unit 2612

NDHH  
March 3, 2006



DAVID OMETZ  
SUPERVISORY PATENT EXAMINER